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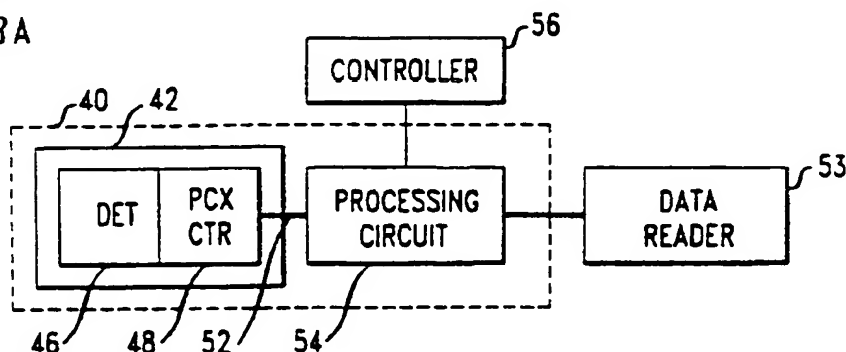
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## (54) Apparatus and method for processing data stored in page-wise memory

(57) Embodiments of the invention include a data receiving apparatus (40) and method of a holographic or other page-wise memory system for processing information read from the memory system's storage medium. The data apparatus includes a multi-dimensional array of pixel elements (42) comprised of pixel detectors (46) and corresponding pixel circuit (48). The pixel detectors detect information such as light information representing data stored in the memory system. The pixel circuits determine a value representative of

the information detected by the individual pixel detectors. Additionally, the apparatus includes active processing circuitry (54) advantageously fabricated in conjunction with the pixel circuits to provide additional "on-chip" processing capabilities, including analog inter-pixel processing. The advantageous arrangement of the additional processing improves processing times, reduces the unprocessed data flow out of the apparatus, and reduces circuitry design space and cost.

FIG. 3A



EP 0 855 717 A3



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## EUROPEAN SEARCH REPORT

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DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 6)
X	US 3 781 830 A (RAPHAEL VILKOMERSON D) 25 December 1973 * column 1, line 47 - column 4, line 29; figures 1,2 *	1,3-9	G11C7/00
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Y	US 5 450 218 A (HEANUE JOHN F ET AL) 12 September 1995 * column 2, line 63 - column 3, line 12 * * column 7, line 29 - column 8, line 47; figures 1-5A,7 *	2,10	
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A	US 5 285 308 A (JENKINS B KEITH ET AL) 8 February 1994 * column 18, line 57 - column 21, line 17; figures 5,12-12B,14 * -----	1,4,6	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int. Cl. 6)
			G11C
Place of search	Date of completion of the search	Examiner	
THE HAGUE	4 August 1998	Vidal Verdu, J.	
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	
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